THE AMES Astrogram

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER, MOFFETT FIELD

June 11, 2001 on-line at: http://amesnews.arc.nasa.gov

Ames researchers capture aerospace spotlight/awards

Against the historic backdrop of the Smithsonian National Air and Space Museum, researchers and scientists from NASA's "aeronautics" centers were rewarded for their hard work at the third annual Turning Goals Into Reality (TGIR), conference held in Washington DC, May 16-17, 2001. Ames Research Center was again recognized as a center of groundbreaking research in the area of aero-space technology.

Ames managed to improve on last year's impressive results, winning a total of nine awards and having the lead center role in four areas.

"We are pleased with the continuing success of the Center in the TGIR program, and delighted with the recognition of our accomplishments. The awards are a tribute to the technical capabilities and motivation of our staff," said Skip Fletcher, Director of Aerospace.

The annual TGIR awards were established in 1997 to recognize major accomplishments by NASA's aeronautics and aerospace teams and their industry and academic partners. NASA's Office of Aero-Space Technology (OAT) establishes goals and objectives based on the nation's aerospace research mission, and the teams that best accomplish these goals and objectives are recognized.

One of the hot topics at this year's conference was the growing problems with airport capacity leading to flight delays, cancellations and public frustration. With air travel expected to grow and airport expansion projects meeting stiff opposition, efficient management of the nation's airspace system is the only option. Five teams from Ames received awards for addressing this problem.

The Future ATM (air traffic management) Concepts Evaluation Tool (FACET) team under Ames leadership received the "increase capacity" award for developing air traffic management software that can evaluate air traffic patterns and determine how different conditions affect these patterns. A scenario such as severe weather over Chicago can be input into the software and it will forecast where problems will occur. With this information, controllers can route aircraft around problem areas decreasing the impact on the air traffic system.

This year the Administrator's award was presented to the Aircraft Vortex Spacing System team. The team conducted tests using radar to detect and analyze the turbulence that aircraft produce when taking off or landing. It is hoped that this new technology will permit increased airport capacity by allowing controllers to more efficiently space aircraft.

The Aircraft Icing Project Team received the "revolutionize aviation" award. The team determined icing conditions, refined icing forecasting products and determined the effects of ice on aircraft performance. This work will improve aircraft de-icing procedures and increase safety in cold weather operations.

Although not directly related to airport capacity, the Airframe Noise Reduction team received an award for work that will make airport operations quieter. The team conducted work identifying structural areas on aircraft that produce noise during take-off and landing. The information gained from this research will eventually

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photo by Jonas Dino

Ames' X-33 thermal protection team proudly displays their TGIR award at the recent Washington DC event.

CTR confronts air traffic congestion

Ames researchers are testing the capability of radar to detect the swirling eddies of air that trail flying aircraft. This might help unclog airports by allowing airplanes to fly closer together, according to computer scientist Karim Shariff of Ames' NASA Advanced Super computing (NAS) division.

"Engineers have been improving radar since it was invented during the World War II era, and radar can now profile the atmosphere," said Shariff. "The idea is to detect where the vortices are so airplanes can be spaced closer as they come in for landing."

Shariff spends the bulk of his time working at the Ames/Stanford Center for Turbulence (CTR). He said that the radar commonly used by the National Oceanic and Atmospheric Administration (NOAA) to look at the atmosphere may also be able to detect airplane wakes.

"I did analyses of radar reflections from aircraft vortices, and the reflections are the strongest at a frequency of 50 MHz," he said. NOAA radar also operates at 50 MHz.

Shariff's study is part of NASA's Aircraft Vortex Spacing System (AVOSS) research, an effort aimed at reducing airplane separations during approaches to landings. "One reason airports are congested is because airplanes have to be spaced far enough apart so they won't fly into the wakes of the airplane ahead," he said. Each year there are "incidents" involving larger airplanes, and other cases during which one or two light airplanes crash due to encounters with aircraft vortices, explained Shariff.

"To avoid such problems, airplanes are spaced far apart," he said. "If pilots and air traffic controllers can use a radar system to detect dangerous vortices, then airplanes could fly closer together," he stated. "If they discover dangerous vortices, the planes can fly farther apart," he said.

"The next thing is do a real-world test," said Shariff. "The U.S. Air Force has agreed to do the test at Vandenberg Air Force Base, CA." The Air Force was already planning to test radar to help correct forward-looking laser aiming devices on a 747 jumbo jet, according to Shariff. He said that he had asked Air Force officials if he could conduct his tests using the radar to look at the swirling air that trails the 747 and they

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2001 Galileo scholarship winners announced

Winners of the Galileo memorial scholarship for 2001 were announced at a banquet dinner at the Wyndham Garden Hotel in Sunnyvale on May 17. This year's scholarship recipients are: Jesse Alejandro and Ivana Chang from San José, Gregory Donaker from Berkeley, Tammy Ma from Fremont and Saini Swati from Tracy. They are all among the top students from their respective high schools. All are accomplished athletes and musicians, and are heading to prestigious universities throughout the country to study science and engineering.

Tammy Ma and Gregory Donaker each received a scholarship valued at $1,750. All other recipients were presented with $1,000 awards. Each student was also given a scholarship certificate at the awards banquet.

In addition to the awarding of the Galileo scholarships, world-class aerobatics champion Cecilia Aragon gave a fantastic presentation entitled, "From Fear of Flying to the World Aerobatic Championships." During her presentation, Aragon showed some amazing video footage of her piloting skills, and encouraged everyone to take on those challenges that may initially frighten them.

The Galileo memorial scholarship was established in 1973 by Ames and the San Francisco Section of the American Institute of Aeronautics and Astronautics (AIAA) to commemorate the crew who perished in the Galileo I aircraft accident on April 12, 1973.

The Galileo I was a Convair 990, operated by Ames as an airborne laboratory for research in aeronautics, astronautics, astronomy and Earth observations.

The scholarship program is supported through donations. Residents of the Bay Area and children of Ames civil service employees, retirees and on-site contractors are eligible to apply for the scholarships. The scholarship recipients were selected from a pool of 158 applicants.

Administrative management of the scholarship program is provided by Ames' Anita Borger of Code A. Additional scholarship review support is provided by Antoinette Price of Code D; Sidney Sun, of Code SL; Gano Chatterji, Raytheon, of Code AFC; the author in Code AFC, and members of the AIAA San Francisco Section Council.

photo by Corwin Lakin, AIAA San Francisco Section

Matt Jardin, AIAA SF chairman (far left), with 2001 Galileo memorial scholarship winners, left to right, Jesse Alejandro, Ivana Chang, Swati Saini, Tammy Ma and Gregory Donaker. Jack Boyd, executive assistant to the Ames Director, is shown far right.

BY MATT JARDIN

Ames researchers propose Mars scout projects

Recently, six Ames researchers traveled to the 2001 Mars Scout mission concepts workshop in Pasadena to present their innovative ideas for 'faster, better, cheaper' ways to explore the red planet.

A NASA review board is currently considering the more than 40 proposals offered by workshop participants from NASA centers, academia and industry.

Mars Scout missions are a new class of focused, high-priority, experiment-based missions that can be flown for less than $300 million each. Scout missions are part of NASA's restructured Mars exploration program. The first Mars Scout mission will depart Earth as early as mid-2007. The proposed missions are based on the concept of using decentralized, competing NASA and non-NASA teams led by their principal investigators.

The Ames proposals included:

• Dr. Chris McKay discussed the AMEBA (Autonomous Mars Environmental and Biological Assay) concept. This project will use the already built 2001 Mars Lander. It proposes an Ames-led mission for Mars Scout to fly in 2007, with McKay serving as Principal Investigator (PI). The most innovative aspect of the proposal is a plant growth module (PGM) which will be mounted atop the lander and hold 10 varieties of a genetically-engineered mustard plant called Arabidopsous Thalania. The PGM will address key science questions about the nature of the Martian soil and the possibility of establishing future greenhouses on Mars.

• Dr. Robert Haberle presented the Pascal project, a concept based on setting up a global network of 24 weather stations on Mars. Each weather station will make an hourly measurement of pressure, temperature, optical depth, and humidity for 10 Mars years (more than 18.8 Earth years). The most innovative aspect of the Pascal mission proposal is its unique entry probe, designed by Marc Murbach, Code SF. The probe is small, light, and self-stabilizing and could be used in future missions to deliver other payloads to Mars' surface.

• Dr. Michael Sims proposed Long Day's Drive--a Rover on Mars operating during a period of sustained light.

• Marc Murbach proposed Aeolus, a high-precision Scout mission concept. This mission proposes to investigate aqueous environments on Mars that are otherwise inaccessible, determine their local mineralogy and geology, and conduct soil chemistry experiments and optical imagery interpretations at each site.

•Dr. Larry Lemke. together with Dr. Ronald Greeley of Arizona State (ASU), presented the Airplane for Mars Exploration (AME), with Lemke to serve as mission manager and Greeley as PI.

•Dr. Butler Hine, standing in for Dr. Steven Zornetzer, presented the proposal called Bio-Inspired Engineering of Exploration Systems (or BEES). The concept consists of micro-flyers the size of a human hand. The micro-flyers, would be launched from a Mars lander by catapult across the red planet's surface and perform aerial surveys enabling them to target and land at a particular landing site. The micro-flyers' design will enable them to use sensors and navigation techniques based on a bumblebees' flight.

Six to ten of the 40 Scout proposals will be funded for further study.

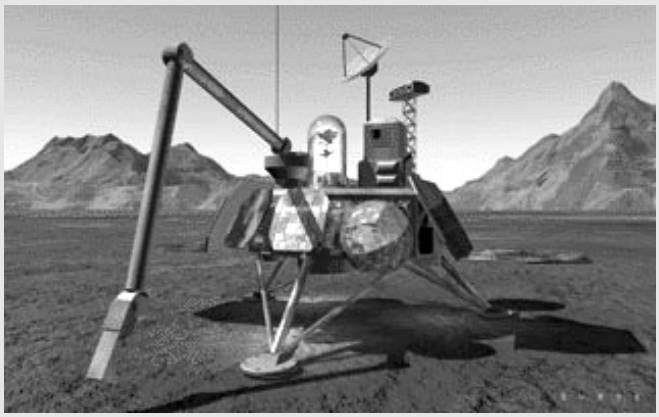

Image of the Autonomous Mars Environmental and Biological Assay (AMEBA), an Ames-led proposal for a Mars Scout mission in 2007. Several Ames researchers presented their innovative ideas for Mars exploration at a recent workshop in Pasadena.

BY KATHLEEN BURTON

Magic and humor serve to teach safety lessons

"Let's see what kind of trouble we can get into today," said magician and humorist John Drebinger opening up one of his many recent 'Ensure Your Safety' talks at the Ames main auditorium. An accomplished entertainer, Drebinger is renowned for his offbeat safety presentations to employees of some of America's biggest business organizations. He was invited by the Center's Voluntary Protection Program (VPP) planning team to "keep safety the focus of our attention" in the words of Center Director Dr. Henry McDonald.

"Come on up here," he coaxed Karen Gentry of Ames' Financial Management Division. "Be careful coming up the steps; tripping wouldn't be good at a safety talk," he joked.

"What's this?" he asked as he performed sleight of hand tricks for the audience with a small fuzzy red ball using Gentry as his accomplice. "Supposedly, he put one ball in my hand, but when he opened it, there were two," Gentry later related.

"Before you go, I have a present. How would you like this watch?" Drebinger asked, returning to Gentry her very own timepiece. "He grabbed my hand when I first went up there, and that's when he must have taken my watch," she said. "I didn't notice it was gone until he lifted it out of his pocket. He's a very crafty fellow," she added. His humorous approach and magic tricks certainly seemed to relax and warm-up his audience.

"What's this safety stuff all about?" he asked, easing into the reason for his talk. "I work in an office or a lab and I know what I'm doing," he said, verbalizing what many in the audience were probably thinking. "Nothing bad can happen to me. Why should I work safely?" he mused. Then he showed pictures of his family in his wallet. Everyone should be safe for their family's sake, or simply to enjoy activities like pleasure boating, he said. "If that boat's the reason why somebody works safely, well that's okay, too," he added.

"Think in terms of why you want to work safely," he said. "There is NO place that is safe. Everybody who came in here today came up stairs. Did you use fall protection?" he asked. Even handrails are safety devices, he explained. Always using handrails on steps is safer, he pointed out. "Don't just grab for a handrail as you slip, because you can hurt your back."

"You folks have a lot of steps here, and if you use the rail, you have less chance of being hurt. You need to take personal responsibility for your safety," he stated. After the talk, most people were observed using the handrails as they descended the auditorium steps.

Even walking through the doors of a warehouse store to shop can be unsafe, said Drebinger. He told the story of an employee at the Johnson Space Center who inadvertently deflected a drill press that fell on him at a warehouse store. He was injured and was removed from flight status, according to Drebinger. He added that, personally, he would never take children into warehouse locations.

photo by Tom Trower

Karen Gentry of Ames' Financial Management Division (left) assists John Drebinger (right) with a magic trick. Drebinger is a magician and humorist, who gave a series of talks at Ames on safety.

"You work together, so you don't want to see colleagues hurt," he said. "And, it is possible to predict the future," he asserted. "I'll give you an example." He then told a story about observing a driver make an unsafe left turn. He bet his child that in a short time they would see the driver make another unsafe move and, sure enough, they did. He related a second automobile story. "I saw a dented-up car, and unconsciously put my foot above the brake. When they cut in front of me, I hit the brake, and avoided a collision," he said. "Safety is also about 'What if something happens? What will I do?'" he said.

"I've done some illusions — tricks for you. We take a short cut, and it works — I can eat a hamburger, brush my teeth and be on the cell phone all at the same time. This teaches our brains that it's safe to do unsafe acts. But it's an illusion," Drebinger said. Not only lazy people take short cuts, he offered, everyone does to save time and money. "The pressure is on to do it quicker," he said. "You take a shortcut, and you teach someone else to do it too. It's a kind of unconscious learning that takes place. If you're really good at something, you must still do it the right way so that you teach them the right way to do it," he added.

"The greater majority of injuries don't kill people, but they affect them for the rest of their lives," he said. "I'm going to show you how a magician tears a newspaper up and puts it back together again. The newspaper is like you. You can rip it up and tape it. The newspaper is taped, but it's not as good as it was before. After an injury, you are more likely to be injured again," he said. He tore a newspaper, appeared to unfold it, and it was not ripped.

Personal protective equipment affords a safety margin if something goes wrong, Drebinger said, transitioning into another safety subject. "We should always use seatbelts. Seatbelts apply to everybody. Anybody ever needed one?" he asked the audience. "You?" he said to a man who raised his hand. "What happened?" "I rolled my car," the man said.

"I only needed a seatbelt once," said Drebinger. He said he was driving on a country road and slowed to 35 mph when he saw a truck stopped ahead at an intersection. "The driver looked both ways, but he still hit me and dragged my car 150 feet. I wouldn't be here to make this show today if I hadn't been wearing that seatbelt," Drebinger said. "A policeman at the accident site told me, 'it happens a lot.' Some of you are walking around your work facility and thinking of something else, galaxies, maybe, and not paying attention, he continued. Not actually seeing what you are looking at — cognitive failures, such as this — are very common," he said. "They looked, but they didn't see."

In many cases, victims can do something to lessen their injury, Drebinger asserted. "Even when other people mess up, I can do something to protect myself," he said. "It's what you do that makes the

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Minority University Research and Education Program (MUREP) students arrive at Ames

MUREP NASA Scholar students are shown here on their orientation day. The students will be involved in various engineering and research projects during their ten-week internship at Ames. The program began May 29 and ends August 3. This year, Ames is pleased to host 33 Interns from various states across the country and Puerto Rico. The NASA Scholars Summer Internship Program is part of the MUREP program within the Equal Opportunity Programs Office, Code DE. Program Manager Brenda Collins and MUREP team members Mary Bravo and Marissa Travers have an exciting program planned for the Interns this year, so look forward to follow-on articles throughout the summer.

photo by Eric James

WWII bomber pilot visits Ames

photos by Tom Trower

On May 18, a Channel 7, KGO TV news helicopter arrived at NASA Base Operations, Building 158, to pick up reporter Wayne Freedman; cameraman Doug Laughlin and Walter and Violet Hughs to transport them to Stockton. Hughs, a bomber pilot during WWII, boarded a WWII bomber in Stockton and arrived back at Moffett in the early afternoon. Freedman interviewed Hughs inflight from Stockton to Ames and then again on the ground at Base Operations for an upcoming TV news special segment.

Walter Hughs, (right), World War II veteran and subject of a Channel 7 special report, arrives at NASA Base Operations at Moffett Field.

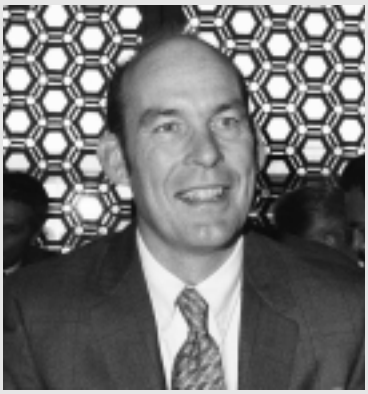
Sally Ride visits Space Camp

photo by Valerie Bunnell

Former astronaut Sally Ride, the first American woman to fly in space, shown during a recent visit to U.S. Space Camp, California.

Horace Emerson passes away

Horace F. Emerson passed away in Portland, Oregon on April 8. He was 82. Emerson was born in Grass Valley, CA in 1919 and was a long-time Sunnyvale resident, moving to Reno, NV in 1975.



Horace Emerson

Emerson was a decorated veteran of World War II, European Theater, 89th Infantry division and also a mason for 50 years.

He was a graduate of the Stanford School of Engineering in 1947. Emerson was employed for 27 years with NACA and NASA Ames (1947-1974) working in the 12-foot and 14-foot wind tunnels. He retired as director of the Ames Office of Technology Utilization in 1974.

Emerson is survived by his wife of 59 years, Donna, and children Jim and Judy; daughter-in-law, Shelley; granddaughters Hearther, Hillary and Dana and great-granddaughter Rowen. The family recommends donations to the Stanford Band.

Volunteers promote 'tech' awareness

Volunteers from Ames and throughout the Bay Area are strong supporters of Oakland's annual Math, Science and Technology Awareness Fair. This year was no exception!

Volunteers at the May 22-23 Oakland Math, Science and Technology Awareness Fair show mineral samples to young attendees.

On May 22-23, more than 60 enthusiastic volunteers descended upon the Henry J. Kaiser Convention Center for this year's event. The estimated 3,000 attendees were treated to exhibits offered by 20 different groups.

The Fair has been in existence for 10 years and originated as a place where minority students, kindergarten through eighth grade, can meet and interact with engineers and employees in science, high tech, business, education and government. For many of these students, it is the first time they are able to see such an array of ideas and concepts. The students are bused to the Fair from East Bay schools throughout Alameda and Contra Costa Counties.

Each year, the Society for Mining, Metallurgy and Exploration (SME), San Francisco Section's, Government, Education and Mining (GEM) Committee provides educational outreach through an exhibit about minerals and mining, according to Joe Hanzel, facilities safety manager for the Astrobiology and Space Research Directorate and an SME member. This was the fourth year for the SME-GEM exhibit, one of the most popular at the Fair, according to organizers, including the African Scientific Institute and the Oakland Unified School District.

Students and teachers alike agree about the neat things to see at the exhibit. The students are treated to hands-on examination of mineral specimens (ore) and can relate to it's relevance in their life by looking at finished products on display that are common in their schools and homes. Hand loupes for viewing the minerals are demonstrated by the volunteers and provided to the students for a personal close look at some of the wonders of the Earth's resources. There are hands-on quizzes about coal, pumice, iron, bauxite and the recycling of aluminum. There are over 20 minerals on display and related finished products. The volunteers ask questions of the visitors to find out about their knowledge and perceptions of the Earth.

This year's volunteers pool represented many professions and came from companies in the Bay Area representing mining, engineering, construction, science, environment and government. In particular, the GEM Committee is especially grateful to this year's Ames participants. They included Bruce Borchers, Orbital Sciences Corporation; Lynda Nicholson, Professional Analysis, Inc.; Alissa Morelan, Ivan Vines and Stepharn C.J. Gracia, Johnson Controls, Inc.; Michelle Lane, Harold Francis, Mark Moran, Omar Talavera and Rob Merlo, Lockheed Martin Engineering & Sciences Company; and George Cooper and Joe Hanzel from NASA.

For more information about the annual minerals exhibit at the Fair, contact Joe Hanzel at ext. 4-0265 or via e-mail at: jhanzel@mail.arc.nasa.gov

Free flights, plane pull, classic cars featured at Ames

A full day of activities, including free flights aboard a variety of privately owned aircraft, an opportunity to pull a 150,000 pound jet aircraft 12 feet in the fastest time and a classic car display will be featured at Moffett on Saturday, June 16.

Sponsored by the Santa Clara County Law Enforcement Torch Run, the third annual "Airplane Pull" will begin with registration at 8 a.m. Approximately 4,000 participants and spectators are expected to attend the Airplane Pull, which benefits the Special Olympics in Santa Clara County. Last year, more than $20,000 was raised from the one-day event. Plane Pull teams consist of 23 members competing against each other to pull a United Airlines Boeing 727 a set distance in the shortest amount of time. Gates will open at 7:30 a.m. The competition will begin at 9 a.m. and continue until 2 p.m.

Starting at 10 a.m, the Experimental Aircraft Association (EAA) Aviation Foundation's Young Eagles will offer free flights over Moffett Field for youths ages 8 to 17. The event is designed to educate young people about airplanes and help them discover career opportunities in aviation. EAA pilots volunteer their time to support this activity and bring with them 35 aircraft for the youths to ride in. The flights, which are designed to provide a motivational aviation experience for the youths, will continue until 3 p.m.

Two young eagles, Erin and Kelly O'Neill of Santa Clara, flew in a Cessna 177 (Cardinal) aircraft at Moffett during last year's International Young Eagles Day.

"The Young Eagles program is trying to reach out to children who want to spread their wings and conquer the sky. This event will provide Bay Area kids with a unique opportunity to fly on small and medium-sized airplanes side-by-side with real pilots," said Young Eagles program coordinator Ron Palermo. "The local EAA Chapter is excited about the opportunity to hold this Young Eagle's event at an historic place like Ames, so well known for its aviation research and strong community ties."

Also featured during the day will be a display of approximately 100 classic cars representing several local car clubs, demonstrations and displays of law enforcement equipment, musical entertainment and refreshments.

Admission is free to all events. No pets will be allowed. Visitors are urged to enter Moffett via the Ellis Street gate and proceed to Hangar 1, where free parking will be available.

Further information about the Young Eagles is available at www.eaa62.org. Details about the Plane Pull can be obtained by calling Tiffany Lloyd Lofton or Sgt. Danny Acosta at (408) 267-2734.

BY MICHAEL MEWHINNEY

Brown University professor speaks at Ames

photo by Tom Trower

On May 24, Dr. Annette Coleman, professor of natural history at Brown University, delivered a lecture at Ames entitled "Selection from first principles: why all life forms will speciate." Her thesis is that since the universe is not stable, all living creatures will always be comprised of subgroups which are selected for successful genetic exchange.

Contractors respond to challenge

Congratulations to all Ames contractors. Your response to Mr. Goldin's challenge has set a record here at Ames. The contractors have currently completed over 125 days or 1,000,000 work hours with no lost-time injuries. We look forward to maintaining a safe workplace and watching this record grow.

Senior SAIC scientist visits Ames

Dr. Greg Gmurczyk, senior scientist at Science Applications International Corporation (SAIC) for the NASA Office of Space Science, right, visited Ames on May 23. Here he is shown in discussion with the Information Science and Technology's Directorate's Tony Gross.

photo by Dominic Hart

Ames captures TGIR spotlight

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lead to quieter aircraft designs, thereby decreasing the disturbance to communities surrounding airports.

The International Space Station has highlighted the need for a safer and more affordable transportation to and from low Earth orbit. Two Ames-led teams are speeding to accomplish this goal. The Highly Maneuverable Crew Transfer Vehicle Development team has designed a reusable vehicle concept that uses ultra-high temperature ceramics on the leading edges. This allows more controlled descent from space and increased maneuverability in the atmosphere. The X-33 Thermal Protection Systems Development team received the "mission affordability" award for the development and integration of thermal protection materials on a fully reusable launch vehicle. These systems will be critical to the development of the next-generation reusable launch vehicle under the Space Launch Initiative. A fully reusable vehicle will significantly reduce the costs of sending cargo and personnel to the space station.

This year, two design tools received awards. The Control Designer's Unified Interface (CONDUIT) Design team received the "engineering innovation" award. Developed at Ames, CONDUIT allows for the rapid modeling and analysis of flight-control systems for new aircraft. The system uses a graphical user interface to determine the benefits and weaknesses of different design specification. This tool has reduced the cost and development time for flight control interfaces in numerous manned and unmanned aircraft. The Numerical Propulsion System team received the "pioneering technology innovation" award for developing software that is able to completely model a propulsion system. The software will permit the testing of new designs and modifications, reducing development and testing costs.

A new goal this year from OAT was to develop commercial applications for NASA technology. The Broadband SatCom/Ring Buffer Network team was awarded the "commercialize technology" award for accomplishing this task. The team developed technology to increase satellite-based transmission of data creating a broadband solution for areas not served by land-based systems.

The 2001 TGIR conference provided two days of thought-provoking presentations and candid panel discussions on the future of aviation and space travel. NASA's technology leadership role, commercial applications of NASA-developed technologies and the energizing of industry and academic partnerships were among the topics discussed in the numerous conference workshops. The annual conference gives leading experts in the field a chance to step back, debate and collaborate on the future of aeronautics and aerospace.

The next TGIR conference is planned for May 21-22, 2002 at Ames.

BY JONAS DINO

Hoy passes away

Herb Hoy died on May 13, 2001, as a result of a heart attack.

Hoy was born in Seattle, where he received degrees in both mathematics and aeronautical engineering from the University of Washington. He worked the past 30 years as a computer engineer here at Ames and more recently at Dryden.

Hoy was an avid golfer and an active member of the Ames Golf Club. He will be missed by his many friends and co-workers. Services were held May 19.

Federal agencies ordered to upgrade new web sites

Recent federal law has mandated that all federal agencies undertake an effort to upgrade new web sites to be compliant with new national standards.

Section 508 of the Rehabilitation Act of 1973, was amended on December 21, 2000. This law requires federal agencies to make all new electronic and information technology developed, procured, maintained, or used by the agencies accessible to federal employees and members of the public with disabilities. Center exposure to liability for complaints of non-compliance begins June 21, 2001.

Accordingly, all new web sites launched or modified after June 21, 2001 must meet this criteria. The relevant 16 standards can be found at: http://www.webaim.org/standards/508/checklist.

The web services group is offering a Section 508 11th hour web users group (WUG) seminar to assist in making the required changes to Ames sites.

This presentation covers information ranging from high-level policy to implementation details and HTML tags. Technical staff will be available to answer any questions about Section 508. The presentation will be held June 20 at 11 a.m. to 12:30 p.m. in the bldg. N-258 auditorium. Send topics you wish to have addressed to Felicia Multz at e-mail: fmultz@mail.arc.nasa.gov The contact person is Elizabeth Tu at e-mail: etu@mail.arc.nasa.gov or ext. 4-6348. Web sites URLs are: http://wug.arc.nasa.gov and http://webmaster.arc.nasa.gov/access

CTR confronts air traffic congestion

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consented. He said the Air Force does not plan to charge NASA for the tests.

"The costs so far have just been my own pencil-and-paper work," said Shariff. He explained that the tests should be done in a real-world situation because of the many variables that can affect aircraft vortices, including crosswinds, atmospheric turbulence and other factors.

There are special features that have to be developed before the NOAA radar could be used for tracking vortices. "Synthetic aperture radar, which combines data streams from a moving radar, might be a possibility for development of an airborne vortex tracker," he said.

BY JOHN BLUCK

Ames manager receives prestigious award

George Sarver, project manager for the Space Station Biological Research Project (SSBRP), was presented with an agency Quality and Safety Achievement Recognition (QASAR) award for 2000. Dan Goldin recently presented the award at a continuous improvement conference in Washington D.C. In January, Sarver was nominated for and received the Ames award, which carries a nomination for the Agency award. He was then selected among nominees from every NASA center to receive the Agency award.

Sarver's job duties include a comprehensive safety and mission assurance effort. He has provided outstanding management support to ensure that safety, mission assurance and other requirements are effectively integrated into many highly complex systems by both U.S. developers and international partners.

Sarver had the foresight to develop the first risk management plan for SSBRP. This plan includes a framework for using safety priorities in risk decision-making. He has played a crucial role in developing quantitative reliability goals for the various SSBRP payloads, as well as defining the microgravity payload fire protection design requirements for the payloads. Both of these efforts are serving to reduce negative system performance impacts while meeting safety and performance requirements and increasing the likelihood of mission success.

QASAR awards are presented locally at Ames and agency-wide to individuals who contribute to significant advances in safety and quality programs in a variety of capacities. Awards are presented in four categories: safety and mission assurance personnel, NASA employees outside of safety and mission assurance, non-NASA government employees in NASA support roles, and contractors and subcontractors making significant safety and quality related contributions. Please consider your co-workers or other deserving Ames personnel as nominees for future QASAR awards.

BY DOUG SMITH

George L. Sarver III shown here in his office, is the recipient of the 2000 QASAR award for outstanding leadership in the field of safety and safety awareness.

photo by Tom Trower

SAFETY SNAPSHOTS

This feature is one in a series intended to inform the Ames community about facets of Ames' safety and health programs.

Health Unit

PROFILE

When you are at work at Ames, where do you go if you feel sick or hurt yourself? Where do you go if you need laser safety glasses, travel immunizations or consultation about the health effects of a workplace chemical? Ames' Health Unit is a busy multi-functional health care center meeting routine occupational medical needs of Ames employees, while also maintaining readiness to respond to emergencies involving life and health.

CLOSEUP

Dr. Meyers, medical director, says that over 6,500 employee visits each year keep the Health Unit's staff busy. The Health Unit and Fitness Center together provide services in five main areas, including medical care, health maintenance, medical surveillance, wellness and fitness.

The Health Unit's main purpose is to provide medical care and emergency services to all civil servants, contractor employees and visitors. About 20% of visits to the Health Unit are for treatment and advice to address illnesses and injuries. It is very important that everyone report to the Health Unit as soon as they are injured or feel ill. Prompt and appropriate medical care can make a positive difference in treatment and recovery time.

Preventative maintenance is another main focus of the Health Unit and Fitness Center. The Health Unit provides occupational medical examinations, such as spirometry (lung capacity) tests for respirator users and audiometry (hearing tests) for employees who work in high-noise areas. The purpose is to ensure that employees are able to perform their tasks without detrimental health effects.

The Fitness Center provides over 30 fitness classes per week, individual evaluations, fitness programs, special fitness events, a training wall for rock climbing and state-of-the-art exercise equipment. The Fitness Center is designed to help Ames employees obtain their highest level of wellness. For more information, see the website: http://fitnesscenter/

More of us will stay healthy throughout this year's flu season as a result of the over 1,500 flu shots provided to government employees and contractors. The Health Unit also provides health maintenance to civil servants in the form of periodic health assessments, the frequency of which are determined by the employees' age. The Health Unit also plays a key role in the Employee Assistance Program (EAP) to provide civil servants and their dependents with short-term, confidential counseling and referral, as necessary.

For more information about Ames Health Unit, go to Ames Health and Safety Manual, AHB 1700.1, Chapter 3 which can be found on the Code Q website at: http://Q/ or stop by the Health Unit and pick up some of the many health-related brochures on display.

Event Calendar

Model HO/HOn3 Railroad Train Club at Moffett Field invites train buffs to visit & join the club in Bldg. 126, across from the south end of Hangar One. Work nights are usually on Friday nights from 7:30 p.m. to 9:30 p.m. Play time is Sunday from 2 p.m. to 4 p.m. For more info, call John Donovan (408) 735-4954 (W) or (408) 281-2899 (H).

Jetstream Toastmasters, Mondays, 12 noon to 1 p.m., N-269/Rm. 179. Guests welcome. POC: Samson Cheung at ext. 4-2875 or Lich Tran at ext. 4-5997.

Ames Ballroom Dance Club, Tuesdays: East Coast Swing and Jive 6/12, 6/19, Paso Doble 6/26. 3 levels of classes, from Beg. to Int., 5:15 - 6:45pm. Classes in Building 944, the Recreation Center. Women dancers encouraged to join. POC: Helen Hwang, hwang@dm1.arc.nasa.gov.

Ames Bowling League, winter league from September through April on Tuesdays, at 6 p.m. at Palo Alto Bowl. Bowlers needed. POC: Mike Liu at ext. 4-1132.

Ames Diabetics (AAD), meet twice a month on first & third Wednesdays, 12 noon to 1 p.m., in the Ames cafeteria, Mega Bites, far corner of Sun room. Peer support group that discusses news that affects diabetics, both type I & II & exchange experiences in treatment & control & help each other best cope with the disease. POC: Bob Mohlenhoff, ext. 4-2523, or email at: bmohlenhoff@mail.arc.nasa.gov.

Ames Child Care Center Board of Directors Mtg, Every other Thursday (check website for meeting dates: http://accc.arc.nasa.gov), 12 noon to 2 p.m., N269, rm. 201. POC: Katharine Lee, ext 4-5051.

NFFE Local 997 Union General Mtg, Jun 20, noon to 1 p.m., Bldg. 19/Rm. 2017. Guests welcome. POC: Marianne Mosher at ext. 4-4055.

Ames Amateur Radio Club, Jun 21, 12 noon, T28-N (across from N-255). POC: Michael Wright, KG6BFK, at ext. 4-6262. URL: http://hamradio.arc.nasa.gov

Native American Advisory Committee mtg, Jun 26, 12 noon to 1 p.m., Building 19, room 1096. POC: Mike Liu at ext. 4-1132.

Environmental, Health and Safety Monthly Information Forum, Jul 5, 8:30 a.m. to 9:30 a.m., Bldg. 19/Rm 1040. POC: Julie Quanz at ext. 4-6810.

Nat'l Association of Retired Federal Employees, (NARFE), San Jose Chapter #50, Mtg, Jul 6, at Hometown Buffett, Westgate Mall, 4735 Hamilton Av, San Jose. Prog. & bus. mtg. at 9 a.m., followed by lunch, $6.27, in a reserved area. Program starts at 9:30 a.m. POC: Rod Perry (650) 967-9418 or NARFE 1-800-627-3394.

Ames Contractor Council Mtg, July 11, 11 a.m., N-200, Comm. Rm. POC: Paul Chaplin at ext. 4-3262.

Ames Classifieds

Ads for the next issue should be sent to *astrogram@mail.arc.nasa.gov* by the Monday following publication of the present issue and must be resubmitted for each issue. Ads must involve personal needs or items; (no commercial/third-party ads) and will run on space-available basis only. First-time ads are given priority. Ads must include home phone numbers; Ames extensions and email addresses will be accepted for carpool and lost & found ads only. Due to the volume of material received, we are unable to verify the accuracy of the statements made in the ads.

Housing

3 bd/1.5 ba, 2-story twnhs on Luz Avenue, San José. Freshly painted inside, dishwasher, gas heat, w/w carpet, outside child play area/large patio. 1 car port. Easy access to H101/680/280. $295K. Azucena (408) 559-2881.

NRC senior research associate & spouse seek a furnished 2 bdrm apartment or house, Feb 1 to end July 2001. Interested in buying/leasing a cheap, used car for this period. Sophie Wuerger, email to: s.m.wuerger@keele.ac.uk or phone (+44 1782 752299 or +44 1782 584214) or by fax (+44 1782 583055).

One room needed beginning early June. Close proximity to Ames or easy access to cal train. Irish, professioal female, N/S, for long term if possible, 1-2 years, rent approx: $500/mo or negotiable. Diane e-mail diane_purcell@hotmail.com or call (650) 903-0332.

For rent: 2 bd/1bd Duplex 5 min. from Ames in Mountian View just off Middlefield . New paint and carpet, private patio, washer and dryer hook up, two car parking one in carport and storage . N/S and NO pets $1,500./mo. Water, sewer and trash paid for. Call (408) 292-3029.

House 1 mile from Moffett 2bd/1ba, attached garage, recently remodeled. $1,700/mo. Available around June 20. Call (650) 965-0775.

Two sunny, pleasant furnished bdrms for rent in home in Los Gatos/Campbell corner of San José for considerate professional. Safe family neighborhood, near Pruneyard, utils included except for phone. Long term preferred, shorter term possible for summer. Shared bath/kitch. Master bdrm w/bath also available. Lease/deps required. Call (408) 266-7272 & lv. msg.

2 bd/1 ba house, Mtn. View, w/attached garage & lg. back yard. Unfurnished. $2,075 mo. Call (650) 967-0420.

Miscellaneous

Thomasville extra-firm Queen mattress set w/frame. Like new. Paid $1K new, $350 or B/O. Email jcrguitars@netscape.net or call (650) 575-0326.

Maytag Model LD-9801 electric dryer. Like new. $200. Fischer 210 cm X-country skis, poles, and size 44 Alpina boots (~10 1/2 US). $100 or B/O. Email jcrguitars@netscape.net or call (650) 575-0326.

Sears Kenmore gas cloths dryer, white, excellent working condition, $85. Tom (408) 248-1281.

60 Solec S-53 53 watt photovoltaic panels (3180 total watts). In use since 1993. $6,200. Call (650) 575-0326. Email jcrguitars@netscape.net for photos.

Credenza/hutch, 20in x 30in x 46in, beautiful honey-laquer finish, mint condition, only a few months old, $500 (40% of original cost). Call (650) 473-0604.

Aerobic Health Rider in excellent condition $45. Call (650) 938-6546. See http://members.fortuneciity.com/pengluchian/rider.

Rear fenders for 73-74 VW Super Beetle $60 or B/O. Deanna (408) 260-1180 between 5-9 p.m.

Mens brown leather jacket XL, $70 or B/O. Deanna (408) 260-1180 between 5-9 p.m.

Firewood available. No cost, just arrange for pick up. Robin (650) 968-6102.

Large fridge (top of the line, used one year) $750; Power Mac 7200/90 w/accessories $125; treadmill; queen-size waterbed. Call (650) 964-0496.

Beautiful 4'x6' glass dining table, $100. Gorgeous working 55 gallon freshwater aquarium with everything (first class), even the fish, $250. Call (408) 296-8182.

Adult cats (brother & sister, both 8 years old) available for adoption. Have to give them up because of allergies. Cats are very friendly and social, very healthy. Don (408) 248-6421.

Desk-gray metal formica top 48"x30" home or office, sturdy. Gray metal desk armchair, lt green fabric, sturdy $55 both. Call (650) 968-8560.

13-foot fiberglass K-1 kayak, manufacturer: Whitewater Boats by Dick Held, with paddle, neoprene spray skirt, and floatation bag; orange top, white bottom; adjustable seat. $200 or B/O. Brian (650) 940-1673 or brian@landsurfing.com

Oak desk, exc condition, 64Wx30Dx30H, inlaid burgundy-colored top, six drawers, including pencil drawer and file drawer. Desk is hand-made and sturdy. Spacious workspace. $325. Call (408) 255-3525.

Beautiful aquarium, acrylic 55-gal w/ large wet-dry filter, tall oak stand, lights, etc. Exc. condition, good for fresh or marine fish, $350. Frank (650) 962-1314.

Transportation

'70 VW convertible classic, original owner, no smog needed; transmission ok; needs work on top & possibly engine. $1,600. Esther or Art (650) 961-2732.

'86 Porsche 944. Very clean, low milage, well maintained. Air con, pwr steering, cruise control, sun roof (removable), alloy wheels, security alarm system. Maroon w/leather interior. $5,950. Tony (408) 732-7628.

'90 Honda Accord EX (top of the line), 150K mls, orig. owner, silver w/maroon interior, 4-dr sedan, AT, A/C, pwr windows & dr locks, snroof, Sony radio w/10 CD changer (1 yr. old), 4 new tires, fun to drive w/rack & pinion steering, roomy back seat. Reason for selling-bought a new car. Asking $5K. Becky or David (408) 379-2298.

'95 Mercury Tracer Wagon, Trio, exc. condition, Loaded, 68K mls, one owner, $5,700 or B/O. Herb (408) 246-3616.

'99 Dodge RAM 1500 (amethyst) $16,400. Quad Cab loaded with more extras. Pager (408) 686-5003.

Lost & Found

Moffett Field Lost and Found may be reached at ext. 4-5416 at any time. Residents and employees at Ames may also use Internet browser at: http://ccf.arc.nasa.gov/codejp/pages/lostFound.html to view a list of found property and obtain specific instructions for reporting lost or found property and how to recover found property. Call Moffett Field security police investigations section at ext. 4-1359 or email at: mfine@mail.arc.nasa.gov.

Exchange Information

Information about products, services and opportunities provided to the employee and contractor community by the Ames Exchange Council.

Beyond Galileo N-235 (8 a.m. to 2 p.m.)

Ask about NASA customized gifts for special occasions. Check centerwide emails for special sales and events.

Mega Bites (Ames Café) N-235 (6 a.m. to 2 p.m.)

Catering is available for your office B.B.Q. or luncheon. Come by for details.

Visitor Center Gift Shop N-223 (10 a.m. to 4:30 p.m.)

NASA logo merchandise, souvenirs, toys, gifts and educational items. Make your reservations for Chase Park here.

Tickets, etc... (N-235, 8 a.m. to 2 p.m.)

San Jose Giants Baseball and B.B.Q. $15.00 per person, includes full B.B.Q. dinner and game ticket. Fun for the whole family!

NASA Lodge (N-19) 603-7100

Open 7 days a week, 7:00 a.m. to 10 p.m.
Rates from $40 - $50.

NASA Swim Center (N108) 603-8025

June 11 summer hours begin. Summer swim programs start June 18. Sign up early. Lessons available for all ages.

Vacation Opportunities

Lake Tahoe-Squaw Valley townhse, 3bd/2ba, view of slopes, close to lifts. Wkend $490, midwk $180 nite. Includes linens, firewood. Call (650) 968-4155 or e-mail DBMcKellar@aol.com

South Lake Tahoe cottage with wood fireplace and hot tub. Rates from $50 to $130 per night. Call (650) 967-7659 or (650) 704-7732.

Vacation rental, Bass Lake CA 14 mls south of Yosemite. 3 bd/1 1/2ba, TV, VCR, MW, fireplace, charcoal BBQ, private boat dock, great lake view. Sleeps 8. $1,050/week. Call (559) 642-3600 or (650) 390-9668.

Magic and humor serve to teach safety lessons

continued from page 3

difference. Companies and corporations don't get injuries," he said. "People do."

"I talk about this concept — safety — on a day-to-day basis. Safety is about thinking ahead. Safety is thinking about all the consequences," he said. "It's one of those paradoxical things in the universe. All that matters is what you do day-by-day from here on out. It doesn't matter what you did yesterday. It's what you do every day."

"The next place that safety is going is to the prevention of injuries." Drebinger said. Safety day-by-day extends to simple things, such as lifting. Instead of lifting a typewriter by myself, I'll ask for help, he said. "Carpal tunnel syndrome — in the old West it was called stagecoach drivers' syndrome," he joked. He also claimed the condition was once known as 'wash maiden's wrist.'

"To avoid carpal, take a small ball and squeeze it," he said, demonstrating between his thumb and each finger, one at a time. "Each finger is different," he said. He noted that fingers get weaker as you move from the thumb to the little finger. "Do ten reps for each finger. That will strengthen muscles to prevent an injury in the first place," he said.

"Who's got a one-dollar bill in the audience?" Drebinger asked. "Does that look like a real dollar bill? I'm going to read out the serial number and write it down," he said. "L3225826G," two volunteers repeated as Drebinger recorded the number. "Now, tear it down the middle," Drebinger said. "It's federal property," one of the volunteers said, but he tore it in half anyway. "Now, I'll tear it again," Drebinger said. He then took a knife and appeared to cut a lemon and twist it in half. He asked one of his volunteers to remove a rolled up paper from one half of the lemon. Removed and unrolled, the paper was a dollar bill with the serial number L3225826G, and it was not torn. The audience applauded

"The injuries that affect most human beings are not major ones, but are the sprains and the strains," Drebinger said. Picking up a typewriter, a water bottle or a computer alone can lead to injuries, he said.

"I want to make this meeting fun, but I'm sneaky enough to want you to talk about the safety issues afterwards," he continued. "Nowdays, your kids will learn about safety, too," he explained. "When we were in school, we didn't even know about safety glasses."

His son and he "had a cool experience" when working on an automobile together, according to Drebinger. "My son, a 10-year-old, said he had to go get his safety glasses before starting. Your kids will learn safety by watching you," he concluded. Make sure you teach them the right way, he reiterated.

Drebinger gave about a dozen talks to Ames people during his three days at the Center. Judging by the reaction of his audiences, he was effective in conveying his message.

BY JOHN BLUCK

OSHA is coming!

The OSHA VPP preliminary assessment for Ames is scheduled for June 25 through July 3. The OSHA assessment process will be very similar to the safety program self-assessments conducted this past March and April. The five-person OSHA assessment team will be reviewing our health and safety programs, interviewing employees and managers as well as inspecting various facilities. So gather your documentation, continue your activities supporting the Ames Safety Accountability Program, clean up your workplaces and let's show OSHA we are ready for their visit.

For more information about VPP and the OSHA VPP preliminary assessment, including sample questions OSHA may ask managers and employees, take a moment to visit the VPP web site at: http://vpp.arc.nasa.gov. If you have any questions or suggestions for safety improvements, contact your VPP directorate leader or the Safety Office at ext. 4-5602.

THE AMES Astrogram

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035-1000

Official Business
Penalty for Private Use, $300

FIRST CLASS MAIL
POSTAGE & FEES PAID
NASA
Permit No. G-27

THE AMES Astrogram

The Ames ASTROGRAM is an official publication of the Ames Research Center, National Aeronautics and Space Administration.

Managing Editor.....David Morse
Editor.....Astrid Terlep

We can be reached via email at: astrogram@mail.arc.nasa.gov or by phone at (650) 604-3347.

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